

# **AIR QUALITY CONTROL DETERMINATION PACKET**

**for**

## **NON-ROAD ENGINES**



**Arizona Department of Environmental Quality**

**Air Quality Division**

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## **INTRODUCTION**

To expedite the processing of a request for determination of non-road engines, the Arizona Department of Environmental Quality (ADEQ) has created this packet to assist the non-road engine determination process. The emissions from internal combustion engines which qualify as non-road engines will be not be regulated through an air quality permit from the Department.

This application packet assists the applicant in the submittal of information that is required to process their application for a non-road engine determination. Applicants wishing to obtain this determination shall apply to ADEQ, except for facilities located on an Indian Reservation or exclusively in Maricopa, Pima, or Pinal Counties. Engines that will be operated exclusively in those locations should contact the local air permitting authority.

## **DISCLAIMER**

This application packet does not waive the rights of the Director as provided under Arizona Administrative Code (A.A.C.) R18-2-304 to request that additional information be submitted by the applicant to assist in the processing of the non-road engine determination. Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit determination application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. If there is any difference between this application packet and Title 18, Chapter 2, of the A.A.C., the A.A.C. shall take precedence.

## **APPLICATION INSTRUCTIONS**

### **STEP 1: DOES YOUR INTERNAL COMBUSTION ENGINE QUALIFY AS A NON-ROAD ENGINE?**

Complete the appropriate qualification questions on Form 1 to determine if the internal combustion engine qualifies as a non-road engine. If the internal combustion engine does not qualify as a non-road engine, then the engine must be included as part of a permit application, and submitted to the appropriate state or county agency so that the equipment is properly regulated.

### **STEP 2: EMISSION CALCULATIONS**

Form 3 should be used to calculate the emissions, both in pounds per hour and tons per year, from each compression-ignition engine when burning diesel or similar fuel. The emission factors provided are taken from EPA's AP-42. The Permittee should supply emissions data from the manufacturer or certified lab test data with more source specific emission factors when possible, and those emission factors should be used in place of the AP-42 factors. In order to use the manufacturer's emission data or certified lab test data, the Permittee must submit copies of the manufacturer's emission data or certified lab test emission data along with the specifications for each engine. If fuels other than the ones previously listed are to be used, manufacturer or test data must be provided in order to complete the calculations.

The emissions calculated in Form 3 should be tabulated to produce the total emissions from the non-road engine(s) which is recorded in the tables provided on Forms 4.

### **STEP 4: EQUIPMENT LIST**

ADEQ needs to be able to identify all internal combustion engines that will be covered under the non-road engine determination. Use Form 5 to provide a list of all engines claimed as non-road. This list should include the make, model, serial number, equipment identification number, date of installation, engine rating (in horsepower), and the type of fuel used in each engine.

STEP 5: LOCATION AND USAGE

Include with this determination packet a site diagram showing where the internal combustion engine is going to be initially located. In addition, please include an explanation of how the engine to be used.

STEP 6: COMPLIANCE PLAN, COMPLIANCE SCHEDULE, AND CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS

A Certification of Truth, Accuracy, and Completeness must be signed by the responsible official and submitted using Form 6.

STEP 7: EPA TIER CERTIFICATION

Non-road engine determination applications being submitted for internal combustion engines should include a copy of the EPA Tier Certification when available. This certification is usually available through the engine vendor. If this certification is not available, please provide an explanation of why it is not available.

STEP 8: FILING INSTRUCTIONS

The applicant needs to mail the completed application to ADEQ at the following address:

**Air Quality Permits Section  
Arizona Department of Environmental Quality  
1110 West Washington  
Phoenix, AZ 85007**

**1-800-234-5677, ext. 2337  
or  
(602) 771-2337**

## FORM 1: DOES YOUR ENGINE QUALIFY AS A NON-ROAD ENGINE?

The following questions have been developed to help determine if your internal combustion engine qualifies as a non-road engine or if it is required to obtain an air quality permit.

- A. Is your internal combustion engine a compression-ignition engine? Compression-ignition means a type of reciprocating, internal combustion engine that is not a spark ignition engine (i.e. an engine that does not have a spark plug).

☐ YES ☐ NO

**If the answer is YES**, proceed to Question B.

**If the answer is NO**, this engine does not qualify as a non-road engine.

- B. Does your internal combustion engine meet the definition of non-road engine as explained below?

- i. Is the engine in or on a piece of equipment that is self-propelled or serves a dual purpose by both propelling itself and performing another function (such as garden tractors, off-highway mobile cranes and bulldozers)?

☐ YES ☐ NO

- ii. Is the engine in or on a piece of equipment that is intended to be propelled while performing its function (such as lawnmowers and string trimmers)?

☐ YES ☐ NO

- iii. Is the engine by itself or in or on a piece of equipment that is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another (indicia of transportability include, but are not limited to: wheels, skids, carrying handles, dolly, trailer, or platform)?

☐ YES ☐ NO

**If the answer is YES to any of these questions**, please explain, and then proceed to Question C:

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**If the answer is NO to all of these questions**, this engine does not qualify as a non-road engine.

- C. Is the engine used to propel a motor vehicle or a vehicle used solely for competition?

☐ YES ☐ NO

**If the answer is YES**, this engine does not qualify as a non-road engine.

**If the answer is NO**, proceed to Question D

- D. Will this engine, or any replacement engines, remain at one location for more than 12 consecutive months? A location is any single site at a building, structure, facility or installation. Please note that any engine that replaces the engine claimed as non-road at a location and that is intended to perform the same or similar function as the claimed non-road engine must be included in calculating the consecutive time period.

☐YES ☐NO

**If the answer is YES**, this engine does not qualify as a non-road engine.

**If the answer is NO**, proceed to Question E

- E. Is the engine located at a seasonal source? A seasonal source is a stationary source that remains in a single location on a permanent basis (at least 2 years) and that operates approximately 3 months (or more) each year.

☐YES ☐NO

**If the answer is YES**, proceed to Question F.

**If the answer is NO**, this engine may qualify as a non-road engine, please proceed to Form 2.

- F. Will the engine remain at the seasonal source during the seasonal source's full annual operating period?

☐YES ☐NO

**If the answer is YES**, this engine does not qualify as a non-road engine.

**If the answer is NO**, this engine may qualify as a non-road engine, please proceed to Form 2.

# Form 2

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY  
Air Quality Division  
1110 West Washington Phoenix, AZ 85007 Phone: (602) 771-2338  
**STANDARD PERMIT APPLICATION FORM**  
(As required by A.R.S. § 49-426, and Chapter 2, Article 3, Arizona Administrative Code)

1. Determination to be issued to: (Business license name of organization that is to receive permit) \_\_\_\_\_  
\_\_\_\_\_
2. Mailing Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_
3. Previous Company Name: (if applicable) \_\_\_\_\_
4. Name (or names) of Owners/Principals: \_\_\_\_\_  
FAX #: \_\_\_\_\_ Phone: \_\_\_\_\_
5. Name of Owner's Agent: \_\_\_\_\_  
FAX #: \_\_\_\_\_ Phone: \_\_\_\_\_
6. Plant/Site Manager/Contact Person and Title: \_\_\_\_\_  
FAX #: \_\_\_\_\_ Phone: \_\_\_\_\_
7. Plant Site Name: \_\_\_\_\_  
Initial Engine Location/Address: \_\_\_\_\_  
City: \_\_\_\_\_ County: \_\_\_\_\_ ZIP: \_\_\_\_\_  
Indian Reservation (if applicable, which one): \_\_\_\_\_  
Latitude/Longitude, Elevation: \_\_\_\_\_
8. Equipment Purpose: \_\_\_\_\_  
Equipment List/Description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
9. Type of Organization:  
☐ Corporation ☐ Individual Owner  
☐ Partnership ☐ Government Entity (Government Facility Code: \_\_\_\_\_)  
☐ Other \_\_\_\_\_
10. Date of Commencement of operation: \_\_\_\_\_  
Is **any** of the equipment to be leased to another individual or entity? ☐ Yes ☐ No  
Standard Industrial Classification Code: \_\_\_\_\_
11. Signature of Responsible Official of Organization: \_\_\_\_\_  
Official Title of Signer: \_\_\_\_\_
12. Typed or Printed Name of Signer: \_\_\_\_\_  
Date: \_\_\_\_\_ Telephone Number: \_\_\_\_\_

## FORM 3: EMISSION CALCULATIONS

Emissions, in pounds per hour, from the non-road engine(s) are calculated by taking the maximum capacity listed in column (b) and multiplying it by the emission factor for each pollutant in column (c). Emissions, in tons per year, from the engine(s) are calculated by taking the emissions in pounds per hour and multiplying it by the conversion factor in column (d). The emission factors provided are taken from the AP-42. If the applicant can supply emission data from the manufacturer or certified lab test data with more source specific emission factors, then those emission factors should be used in place of the AP-42 factors. Simply cross out the emission factor provided and write in the new emission factor. In order to use the manufacturer's emission data or certified lab test data, the applicant must submit copies of the manufacturer's emission data or certified lab test data along with the specifications for each engine. **An individual table needs to be completed for each engine. Please make additional copies of this form if necessary.**

### *Diesel-Fired Engines with a Maximum Capacity of Greater Than 600 Horsepower*

Pollutant (a)	Maximum Capacity (b)	Emission Factor (c)	Emissions (bxc)	Conversion Factor (d)	Emissions (bxcxd)
	(horsepower)	(lb/hp-hr)	(lbs/hr)	(tons/yr)/ (lbs/hr)	(tons/yr)
CO		0.0055		4.38	
NO <sub>x</sub>		0.024		4.38	
SO <sub>x</sub>		0.0065		4.38	
VOCs		0.0007		4.38	
PM-10		0.0007		4.38	

Reviewer	Date

### *Diesel-Fired Generators with a Maximum Capacity of 600 Horsepower or Less*

Pollutant (a)	Maximum Capacity (b)	Emission Factor (c)	Emissions (bxc)	Conversion Factor (d)	Emissions (bxcxd)
	(horsepower)	(lb/hp-hr)	(lbs/hr)	(tons/yr)/ (lbs/hr)	(tons/yr)
CO		0.0067		4.38	
NO <sub>x</sub>		0.031		4.38	
SO <sub>x</sub>		0.002		4.38	
VOCs		0.0025		4.38	
PM-10		0.0022		4.38	

Reviewer	Date



## FORM 4: TOTAL EMISSIONS FROM ENGINES

Use the numbers calculated in Form 3 to complete the table below. If there is more than one engine being claimed as a non-road engine, be sure to include the sum of the emissions from each engine in the table below.

*Table A: Total Emissions in Tons per Year*

Pollutant	Emissions from Diesel-Fired Engines
	(tons/yr)
CO	
NO <sub>x</sub>	
SO <sub>x</sub>	
VOCs	
PM-10	

Reviewer	Date

## FORM 5: EQUIPMENT LIST

Equipment ID	Engine Rating (Horsepower)	Type of Fuel Used	Make	Model	Serial Number	Date of Manufacture

## FORM 6: CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS

### *Certification of Truth, Accuracy, and Completeness*

*A.A.C. R18-2-304.H. Certification of Truth, Accuracy, and Completeness. Any application form, report, or compliance certification submitted pursuant to this Chapter shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this Article shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.*

By my signature I, \_\_\_\_\_, hereby certify that based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate, and complete.

Name (Print/Type): \_\_\_\_\_

(Signature): \_\_\_\_\_ Date: \_\_\_\_\_